



EQIP Activity Sheet: *EAS590-4*

Nutrient Management with Variable-Rate Management of Phosphorus and Potassium

Minimum Criteria to Qualify for the Nutrient Management with Variable-Rate Management of Phosphorus and Potassium

Purpose: To increase nutrient utilization efficiency and reduce nutrient losses by targeting phosphorus and potassium applications using grid or zone soil sampling, within the Nutrient Management (590) conservation practice standard.

Note: This incentive applies only on tracts having no fields where variable-rate technology for application of phosphorus or potassium has been used prior to signing a contract.

General Criteria:

- The incentive applies to fields on which
 - soils are sampled based on either a grid sampling pattern or on previously established management zones (zones are established before soils are sampled)
- AND
- phosphorus and potassium fertilizers are applied according to a recommendation (prescription) map using variable-rate application equipment.
- Soil sampling will be completed
 - using a grid sampling pattern with grids no larger than 3 acres
- OR
- using management zones
 - Zones must be determined *prior to* soil sampling using
 - aerial or satellite soil/crop condition images, and (or)
 - soil electrical conductivity maps, and (or)
 - a minimum of 3 years of yield monitor maps, and (or)
 - a combination of two or more of these images and maps.
 - Zones developed shall be no larger than 20 acres.
 - One soil sample per zone must be submitted for analysis that is a composite of 12 to 24 soil cores collected within the zone. More soil cores should be collected from pastures, manured fields, and row crop fields having banded fertilizers.
- The Nutrient Management (590) conservation practice standard requires development of a budget of nutrients (NPK) applied and utilized during the soil test cycle. For purposes of the budget, grid soil test results may be averaged for field areas of no more than 80 acres. If it is necessary to average grid soil samples within field areas greater than 80 acres, a justification for

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this decision must be included in the nutrient management plan.

- Average rates for phosphorus and potassium application maps (also called recommendation or prescription maps) will be within 10% of field-average rates in as-applied (as-spread) maps.
- At least one variable-rate phosphorus and potassium (where applicable) application must be scheduled and completed during the contract period.

Documentation Required:

- Dated soil test results summary from an approved soil testing laboratory.
- A field-average budget of nutrients applied and utilized for crop production during the soil test cycle.
- Soil test level maps for phosphorus and potassium for each field.
- Phosphorus and potassium recommendation maps for each field.
- Dated as-applied (as-spread) maps depicting actual rate of phosphorus and potassium applied to each spreading unit. Pounds of material applied should be in same form as recommendations. Example: If recommendations are in lbs of P_2O_5 the as-applied map should also be presented in lbs P_2O_5 instead of lbs of DAP.
- Receipts for all forms of phosphorus and potassium fertilizer used and amount applied.
- Certification that requirements of the Nutrient Management (590) conservation practice standard were achieved. The individual certifying completion of the practices required by this incentive must complete and sign the MO-CONS-10 (<http://www.mo.nrcs.usda.gov/technical/forms/general.html>) or an equivalent form.